PART 611-5: GOALS FOR GROUND TRANSPORTATION

1 RELATE TRANSPORTATION TO LAND USE AND DEVELOPMENT

The use of land and the physical arrangement of development is intimately interrelated with the distribution and type of transportation facilities available. The relationship is interactive in both directions: the introduction or improvement of transportation facilities increases accessibility, facilitating development; the type and density of development that takes place on the land affects the level of travel demand, determining whether roadways will be congested, and whether transit service can be effective. In Rhode Island, transportation is second only to water supply in the degree of influence it exerts on development.

For the past 50-60 years, American society has structured its living, working, and other developed spaces in a low density, decentralized arrangement of land uses known as "sprawl". While satisfying our desires for spacious living in attractive surroundings; we are now realizing that the "sprawl" development pattern also has many impacts and costs. Impacts for transportation include increased auto-dependency and increased travel demands engendered by the wide separation of housing areas from centers of work and commerce, and by the low densities which make transit service economically tenuous.

Here, as elsewhere, the first signs of decentralization from the older urban centers were the "streetcar suburbs" that appeared late in the nineteenth century. Over the next three decades the growth of these suburbs exceeded the reach of the streetcar systems. After World War II, the development of the Interstate Highway System, helped facilitate the pursuit of the "American Dream", -- an affordable government subsidized home and raising a family in the country with a car and plenty of open-spaces. Commercial, industrial activities, and more recently office and support activities, also began to seek locations away from central cities, where land was cheap and access to "new" highways made for cost efficient movement of goods. Suburban and rural residential growth also continued throughout this period as urban residents sought more space, better schools, closeness to nature, and other benefits they perceived were lacking in older urban areas.

The typical local roadway network pattern adopted since World War II has also created problems. As land in suburban and rural areas developed incrementally, without an overall roadway network or "mapped street" plan, each new development's roads have been constructed as isolated "pods" planned to collect the traffic from the development and bring it to the nearest adjoining local or arterial street, but often without providing interconnections with local streets in adjoining developed areas, rather than the "gridiron" street patterns typical of older urban areas. This has required all vehicular traffic to access the arterial system for trips, that could have been handled by local streets if an interconnecting grid had been provided.

Most new commercial development has occurred as "strip" commercial along existing arterials, necessitating numerous access points or curb cuts which diminish the carrying capacity of the roadway. New developments have been incrementally tied into existing local and the arterial system without an overall plan or assessment of the impact of added traffic volumes. Many post-war developments did not provide for alternative modes of travel by including sidewalks for walking or bikepaths, also increasing reliance on vehicular travel.

This physical arrangement has consequences for transportation systems, and the consumers that use them. Today, about 90 percent of all work trips in Rhode Island are made by auto. This statistic is typical of auto-dependent, suburban sprawl development taking place outside of our existing urban centers. Nationally, studies have indicated that transportation (principally commuting) costs have risen to be the second highest expense category, after shelter, for many households.

Public transportation, whether streetcars or buses, operated over fixed routes that were not well adapted to spread-out development. Housing and employment densities declined to levels below those that could be efficiently served by any fixed-route transit systems, and they rapidly lost riders -- some to the point of disappearance.

Other trends depict the implications of Rhode Island's land use patterns for transportation:

- Even though the state population grew only 10% from 1970-2000, vehicle miles traveled (VMT) grew by 70% in that same time period.
- 95% of land under local jurisdiction is zoned for development
- Between 1970 and 1995, residential acreage grew from 89,000 acres to 140,000 acres
- Between 1940 and 1990, the combined populations of the rural western and southern portions of the state increased by 250%. The population of Providence decreased during that same time period.

A 1999 study done for Grow Smart Rhode Island, *The Costs of Suburban Sprawl and Urban Decay in Rhode Island*, documented the costs of sprawl. Those costs include loss of useful open space, disappearance of community character, conflicts between incompatible activities, increasing demands for high-cost urban services in communities unable to afford them, and eroding tax bases and underutilization of infrastructure already paid for in older urban areas. To keep up with the growing burden on local municipal services, such as wastewater treatment and disposal, education, health care and police and fire protection localities need increased tax revenues. Increased tax revenues are achieved through attracting more industries and businesses, which in turn attracts more families and more low density residential development and the need for more revenues, creating a "dog chasing it's own tail" scenario. The Grow Smart study predicted that Rhode Island citizens would save $1.5 billion over the next 20 years if more compact mixed-use development took place. The study also predicted that if sprawl type development patterns continue to take place over the next 20 years, it would result in 609 million more vehicle trips, than a more compact development pattern. Other associated societal costs as a result of these extra vehicle trips are increased air and water pollution.

The *State Land Use Policies and Plan* calls for controlling sprawl, and this transportation plan must establish the same goal. Transportation benefits will be to reduce the need for auto travel and to make transit more feasible and cost-effective, in turn avoiding water and air pollution, limiting the growth in congestion, and maximizing the public investment in existing roads and transit service.

Specific goals and policies

1-A. *ACHIEVE MORE CONCENTRATED DEVELOPMENT PATTERNS*, emphasizing growth in existing urban places -- older cities and their downtowns, historic town centers, and other built-up areas. Promote higher housing densities and greater mix of land uses, within the limits of basic compatibility. Support and stimulate this development pattern with multi-modal transportation investments and other essential services.

1-B. *USE TRANSPORTATION TO SUPPORT REGIONAL ECONOMIC DEVELOPMENT* that takes place in existing built-up areas or on prime sites suitable for intensive development. Transportation investments should support both intra and interstate regional economic development opportunities. Examples are development of Quonset Point/Davisville; of prime industrial sites in Cranston and East Providence; of Warwick's proposed business center near the airport; and of the Blackstone Valley in a way that preserves its historic and natural character. Multi-modal access to employment centers is essential for lower-income populations and the growing segment of the population that doesn't own or drive automobiles. Develop incentives to encourage employers to locate in older central city centers.

1-C. *ORGANIZE TRANSPORTATION PLANNING IN RHODE ISLAND AROUND A TRAVEL CORRIDOR FRAMEWORK* emphasizing coordination with land use and congestion management planning. Travel corridor plans will be developed in close cooperation with cities and towns located within the corridors.

1-D. *ENCOURAGE CITIES AND TOWNS TO WORK TOGETHER TO CONTROL LAND DEVELOPMENT ALONG ARTERIAL HIGHWAYS* so as to preserve their function, capacity, safety, and appearance. Strengthen the state's role in access management and corridor preservation through corridor studies.

1-E. *CONTINUE INTEGRATING A REGIONAL PERSPECTIVE INTO THE PLANNING PROCESS* for all aspects of the state's development across both functional and jurisdictional lines. Obtain a high level of official commitment to, and a high degree of public participation in, this process. Coordinate transportation planning with other states and regional planning entities such as the Aquidneck Island Planning Commission, Blackstone Valley Corridor Commission, and Washington County Planning Commission.

1-F. *COMPRESS THE TIME BETWEEN PLANNING AND IMPLEMENTATION* of transportation projects, so they are completed when needed and perform proactive, not just reactive, functions.

1-G. *ELEVATE PEDESTRIAN TRANSPORTATION TO A PRIORITY LEVEL*. Pedestrian transportation deserves equal status with automobile and transit. Every trip involves walking, making it the most pervasive form of transportation. According equal status to pedestrian transportation will require a fundamental change in the way state and local agencies do business. This will not be a quick change, but rather, an evolutionary process.

2 GIVE PRIORITY TO PRESERVING AND MANAGING THE TRANSPORTATION SYSTEM

Better management of the existing transportation system is usually more cost-effective than expansion of the system, and it is essential for safety. System preservation and management refers to many operating and maintenance activities. A greater proportion of the available funds should be allocated to these purposes, at the expense of system development if necessary.

Specific goals and policies

2-A. *FOLLOW REGULARLY SCHEDULED PROGRAMS OF PAVEMENT AND BRIDGE MANAGEMENT.* Otherwise, highway structures will fail or deteriorate prematurely, resulting in safety hazards and the need for more frequent and costly full rehabilitation or replacement. These programs should be publicized.

2-B. *IMPROVE THE PRESENT OVERALL LEVEL OF RIPTA SERVICE.* RIPTA is a public investment that serves commuters and their employers, contributes to the fabric and strength of urban areas, provides a means of transportation for people who do not drive (whether low-income, elderly, students, disabled, or others), improves the environment, and conserves energy.

2-C. *KEEP UP WITH REPAIR AND SCHEDULED REPLACEMENT* of buses, maintenance vehicles, terminals, and other equipment and facilities. Make needed safety improvements, and maintain cleanliness and attractive appearance. Give special attention to maintenance of specialized equipment such as wheelchair lifts, bus shelters, and signage for detours and special events.

2-D. *ENCOURAGE ALTERNATIVES TO SINGLE-OCCUPANT AUTO TRAVEL,* such as transit, carpools, vanpools, and bicycle and pedestrian travel. These programs help to reduce vehicle-miles of travel, conserve energy, improve air quality, benefit the environment in other ways, and support the economy.

2-E. *PROVIDE CONVENIENT INTERMODAL CONNECTIONS.* Examples are train to bus, ferry to bus, car to bus, and airport to all other modes. Provide signs that facilitate intermodal transfers.

2-F. *USE SIGNAGE THAT DISTINGUISHES REGIONS AND THEMES* to provide increased identification for business and civic centers, historic districts, institutions, transportation facilities, tourism destinations, and natural features like rivers and watersheds.

2-G. *GIVE THE PUBLIC BETTER INFORMATION ON TRANSPORTATION MODES* -- the availability of different modes, the services provided, how they are accessed, and their costs, through all media on a continuous basis. Seek ways to communicate with various ethnic groups. Emphasize public transportation, and include services for disabled people.

2-H. *FOCUS ON CONVENIENCE AND RELIABILITY WHEN IMPROVING TRANSIT SERVICE.* Cost, although a concern to some users, is secondary to convenience for many. Plan routes so as to reduce total (door-to-door) travel time.

2-I. *ADJUST TRANSIT OPERATIONS TO THE CHANGING NEEDS OF A DYNAMIC POPULATION* -- the increasing proportion of elderly people, the large number of people with limited capability in English, the requirements that welfare recipients find work, the increasing number of disabled people seeking to travel, the number of students on evening schedules and the prospects for a twelve-month school year, and the dispersed location of many critical facilities and services. Consider such factors in selecting equipment, routes, time of service, and other operational characteristics. This is particularly important for low-income individuals, transitional housing or shelter residents, and the homeless.

2-J. *MAKE PUBLIC TRANSIT CONVENIENT FOR ALL KINDS OF TRIPS,* not only work trips but also social, educational, recreational, medical, and other trips. Extend hours of operation of transit and paratransit services in the evenings and on Saturdays, Sundays, and holidays.

2-K. *INTEGRATE FIXED-ROUTE AND PARATRANSIT SERVICES* to provide mobility to more individuals.

2-L. *INTEGRATE TRANSPORTATION OF STUDENTS WITH PUBLIC TRANSIT* operations whenever possible. Do not duplicate this service where it is reasonably available.

2-M. *REEVALUATE ALL ASPECTS OF PARKING.* Consider changing policies that favor auto travel over alternative modes, including provision of free or low-cost parking by public entities, minimum parking space requirements for various activities, and tax treatment. Enforce handicapped-parking regulations.

2-N. *IMPROVE TRAFFIC FLOW AND SAFETY,* through motorist information systems; well-managed highway construction; and projects such as synchronized signals, left-turn lanes and signals, and reconfiguration of intersections. Apply new and emerging technologies (Intelligent Transportation Systems/ITS). Traffic congestion has become severe in some areas of the state. Trucking, school buses, and tourism are particularly sensitive to these conditions.

2-O. *MANAGE TRAFFIC INCIDENTS,* such as breakdowns, accidents, and disruption due to special events. Both rapid response to emergencies and restoration of safe movement are essential. In Rhode Island, incidents are a major cause of travel delay.

2-P. *PROMOTE LESS-USED HIGHWAYS AS ALTERNATIVES* to high-volume routes (for example, I-295 instead of I-95, US-1 instead of RI-138 in southern Rhode Island), for long-distance trips and when destinations are reasonably accessible from the circumferential route.

2-Q. *INSURE THAT RAIL FREIGHT CONTINUES TO SERVE THE REGION.* Join with other New England states in participating in decision-making on changes in regional rail service, such as changes in ownership. The states will be more effective in acting jointly to obtain objectives such as continuation of at least the present level of service at reasonable rates, maintenance of the network, and accommodating intercity passenger rail service.

2-R. *MAKE THE TRANSPORTATION SYSTEM ACCESSIBLE TO PEOPLE WITH MOBILITY LIMITATIONS AND OTHER DISABILITIES,* and continue to improve public transportation services for those with special needs.

2-S. *STRENGTHEN HIGHWAY SAFETY LAWS AND PROGRAMS,* including more stringent driver training, licensing, and re-licensing; seat belt requirements; drunk driving penalties; making Rhode Island's left-turn rule consistent with national practice; and public education and enforcement, including bicycle and pedestrian safety.

2-T. *IMPROVE LIGHTING ON SELECTED ROADS* and interchanges to permit high volumes of traffic to operate safely.

2-U. *ADDRESS RAIL-HIGHWAY GRADE CROSSINGS* on railroad lines by constructing grade separations, improving protection, or closing them and providing alternate routes and crossing points. Although the last remaining grade crossing on the Amtrak Main Line, at Wolf Rock, was eliminated in 1999, there are fourteen crossings on the Providence and Worcester line between Central Falls and Massachusetts.

3 DEVELOP NEW TRANSPORTATION FACILITIES AND SERVICES, TO MEET NEW TRAVEL NEEDS, MODALLY DIVERSIFY, AND IMPROVE THE TRANSPORTATION SYSTEM'S INTERMODAL CONNECTIONS

The basic components of the state transportation system are in place. Development needs in the next two decades are limited. National and state transportation policies have provided substantial investments in the highway mode over the past five decades, but more limited investments in alternative modes. Future decisions must insure that components of the system are safe, reliable, and modally integrated, offer travelers choices which meet their needs effectively and efficiently, meet the changing needs of the state's population and economy, support land use policies, minimize impacts on the natural and built environments, and integrate new technologies.

Specific goals and policies

3-A. *ESTABLISH TERMINALS FOR INTERMODAL CONNECTIONS AT MAJOR TRANSFER POINTS AND DESTINATIONS.* The Newport Gateway Center provides a model at the more elaborate end of the scale, with intercity and local bus service, a parking garage, and tourist information. In addition the proposed intermodal facility at T. F. Green Airport will be the first totally integrated facility of it's kind in the country offering intercity and commuter rail, bus, rental car, bike and taxi connections.

3-B. *UTILIZE TRANSPORTATION TO SUPPORT TOURISM*, the state's fastest-growing industry. Strengthen linkages between the metropolitan center, air and rail terminals, and tourist attractions in Newport, South County, and the Blackstone Valley.

3-C. *DECREASE THE TIME AND COST OF GOODS MOVEMENT* between the East and West Bay regions and between Rhode Island and southern New England, and points west. Completion of the direct link between Route 146 and the Massachusetts Turnpike has helped achieve this by upgrading connecting roads at key points.

3-D. *PROVIDE A HIGH LEVEL OF TRANSPORTATION SERVICE AT QUONSET POINT/DAVISVILLE INDUSTRIAL PARK,* including freight rail, highway, port, airport, transit, and commuter alternatives.

3-E. *IMPROVE PUBLIC TRANSPORTATION TO AND BETWEEN SUBURBAN COMMUNITIES.* Many commercial and industrial activities have already decentralized from cities to outlying locations. Circumferential transit routes and routes facilitating reverse commuting are essential to serve employers who are located in the suburbs and inner-city, lower-income people who need jobs.

3-F. *PRESERVE RAIL RIGHTS-OF-WAY* for potential future use. These represent opportunities to increase system capacity in congested corridors. They can have multiple uses over the long term.

3-G. *COMPLETE A STATEWIDE NETWORK OF BICYCLE AND PEDESTRIAN ROUTES* for commuter, recreational, and tourist travel. Complete construction of the planned off-road bike path system. Adhere to the "bicycle tolerant" design philosophy in all highway reconstructions, and accelerate the designation and striping/signage of on-road bicycle routes to provide linkages to off-road facilities. Coordinate planning for state and local routes. Improve pedestrian safety.

3-H. *EXPAND ALTERNATIVE MEANS OF TRANSPORTATION TO COLLEGES.* The state's many colleges are major traffic generators, where the volume of automobile traffic and parking threatens to overwhelm the kind of environment desirable for institutions of higher education. Alternatives should be provided and encouraged by reducing the availability of free or low-cost parking and providing free transit passes as part of the fees charged to students.

3-I. *TEST THE POTENTIAL FOR NEW TRANSPORTATION SERVICE BY RAIL AND WATER.* Extend Boston-Providence commuter rail service south in incremental steps to T.F. Green State Airport, Wickford Junction, Kingston, and Westerly. Additional sites in East Greenwich and West Davisville should be considered as "Phase 2" stations once demand is fully analyzed. Study the growth and land use impacts of extended rail passenger service, and work with affected communities to insure that adequate growth management measures are in place. Examine the demand and need for passenger rail service or other transit service on Aquidneck Island using the under-utilized Newport Secondary Track. In addition, commuter rail extension to Fall River and Boston should be considered. Experiment with water transportation between Providence, Newport, and other Bay communities.

3-J. *PROVIDE ALTERNATIVE MODES OF TRANSPORTATION FOR SHORT-DISTANCE, HIGH-TRAFFIC SITUATIONS*, especially when cost, congestion, or other obstacles constrain movement. Examples are direct links in Providence among downtown destinations, the Amtrak station, and the Bonanza bus terminal and links from Amtrak stations and airports.

3-K. *RECOGNIZE THAT EXISTING TRANSIT OPERATORS REPRESENT ASSETS* with capacity to expand. Use their underutilized capabilities and simplify access for users by building expanded services on existing operators, rather than creating new organizations.

4 INSURE THAT THE TRANSPORTATION SYSTEM EMBRACES THE PRINCIPLES OF ENVIRONMENTAL STEWARDSHIP BY MEETING OR EXCEEDING ENVIRONMENTAL STANDARDS, AND PROVIDING TRANSPORTATION FACILITIES WHICH ENHANCE THE COMMUNITIES THEY SERVE

As an integral part of the state's natural and cultural environment, the transportation system has the potential for substantial effects upon the quality of the environment and upon the quality of life of the state's communities and residents. Adherence to principles of environmental stewardship in the development, management and operation of the system's components will help guarantee that these effects are positive: that the system supports attainment of federal and state environmental goals, minimizes its impacts upon natural and cultural resources, and, whenever feasible, becomes a positive force by capitalizing upon opportunities to enhance the livability of the communities it serves.

Specific goals and policies

4-A. UTILIZE TRANSPORTATION PROGRAMS AND PROJECTS TO MAINTAIN AND ENHANCE ENVIRONMENTAL QUALITY AND COMMUNITY LIVABILITY, by including features such as historic preservation, landscaping and streetscaping to improve aesthetics, and water and air quality improvements.

4-B. REDUCE STORMWATER RUNOFF FROM ROADWAYS through best management practices, greater use of vegetated buffers for infiltration, and other approaches.

4-C. SUPPORT THE PRESERVATION OF OPEN SPACE to maintain the rural character of the western side of the state and areas of South County, protect critical resources, provide recreational opportunities, and enhance and reinvigorate urbanized areas.

4-D. FORMULATE DESIGN STANDARDS FOR ROADS AND STREETS other than those on the National Highway System, which respond to the context in which they are located, while adhering to minimum requirements for safety and capacity. These must be flexible to adapt to different situations and must include bicycle and pedestrian accommodations where feasible.

4-E. *MANAGE TRANSPORTATION INFRASTRUCTURE TO ENHANCE ENVIRONMENTAL QUALITY AND COMMUNITY AESTHETICS* by applying urban forestry practices to right-of-way vegetation management and enhancement, runoff control and water quality improvement projects, and limiting the use of de-icing chemicals consistent with safety.

4-F. *REDUCE EMISSIONS OF AIR POLLUTANTS AND GREENHOUSE GASES FROM MOBILE SOURCES, AND SAVE ENERGY by supporting the development and utilization of alternative travel modes (transit, bicycle, pedestrian), encouraging ride-sharing, promoting the introduction of alternative fuel vehicle technologies, and instituting intelligent transportation system technologies to reduce congestion.*

5 INSURE THAT THE TRANSPORTATION SYSTEM EQUITABLY SERVES ALL RHODE ISLANDERS REGARDLESS OF RACE, ETHNIC ORIGIN, INCOME, AGE, MOBILITY IMPAIRMENT, OR GEOGRAPHIC LOCATION

Transportation is a fundamental element in the quest for equality of opportunity. Access to reliable means of transportation is essential to every citizen's quality of life, financial security and freedom of movement. Inequities in the transportation system can exist as differentials in the levels of ***benefits*** (availability or accessibility to facilities, levels of service, investments in transportation systems) provided to different population groups; or in the degree of ***burdens*** (negative impacts of transportation such as inability to access services and jobs, degradation of air quality, noise levels, impacts on water quality, pollution, disruption to communities, etc.) that different communities or geographic areas are called upon to shoulder. The existing transportation system exhibits negative impacts in urban, suburban, and rural communities.

Specific goals and policies

5-A. *AVOID DISPLACEMENT OR LOSS OF TRANSPORTATION SERVICES* to populations of concern. Work to improve mass transit and other transportation services which directly benefit low income, minority, elderly, and disabled populations.

5-B. *INSURE THAT TRANSPORTATION PROJECTS DO NOT PLACE DISPROPORTIONATE ADVERSE ENVIRONMENTAL OR OTHER IMPACTS* upon any community or population group.

5-C. *ALLOCATE RESOURCES THROUGH THE TRANSPORTATION IMPROVEMENT PROGRAM TO PROVIDE EQUITABLE SERVICE OUTCOMES* to all populations.

5-D. *SUPPORT INCLUSIVE TRANSPORTATION PLANNING AND RESOURCE ALLOCATION PROCESSES* that are accessible to, understood by, and constructively engage all population groups and interests in defining and addressing transportation needs.

6 PROVIDE ADEQUATE FINANCING FOR THE TRANSPORTATION SYSTEM

The transportation system is expensive to develop, operate and maintain. Unlike many other governmental functions, however, much of the cost can be met by user fees. The major user fees are gasoline taxes and transit fares. Neither is currently performing its expected function.

Under current statutes, all of the 28-cent per gallon gasoline tax is scheduled to be allocated to transportation by fiscal year 2003. The allocation for fiscal year 2003 is planned to be:

RIDOT – highways (bonds, debt service, operations) ..... 21.25 cents
RIPTA - bus transit (debt service, operations) ..... 5.75 cents
Elderly and disabled transportation..... 1.00 cent

RIPTA fares and other revenues currently (2000) pay about 30 percent of the cost of operations (about 20% is derived from direct farebox revenue). This represents an increase from the 26% recovery reported in 1998. This new estimate includes additional payments from state agencies for RIite Care and RIde low income, elderly, and disabled patronage).

Public transit is a governmental function that does not meet its entire cost from revenues anywhere in the country, and cannot do so. There is no more reason to expect transit fares to equal costs than there is with any other major governmental function -- education, public safety, public health, or others. The current share of transit costs covered by operating revenues, however, continues below the target of 35 percent established by the transportation plan in 1991, indicating that efforts to bolster ridership and attention to service efficiencies continue to be advised.

Specific goals and policies

6-A. *PHASE OUT USE OF GENERAL OBLIGATION BONDS* for improvements to the transportation system, except for the largest projects. Repayment of bond debt is a burden on transportation resources. Projects and programs should be funded on a pay-as-you-go basis except for large projects with a long useful life.

6-B. *WORK TO ACHIEVE RIPTA'S TARGET FOR TRANSIT REVENUES* as a percentage of operating costs, and promote early accomplishment. RIPTA has set a goal (endorsed by this plan) of recovering 35 percent of operating costs from farebox revenues.

6-C. *CONTINUE TO DEVELOP ADDITIONAL FINANCING SOURCES AND MECHANISMS* for major projects, including joint development opportunities.

6-D. *ESTABLISH A GRANT PROGRAM FOR MUNICIPALITIES TO FUND ROAD RESURFACING AND REHABILITATION, AND RELATED LOCAL ROADWAY IMPROVEMENTS.* Use a formula that includes factors such as road mileage, functional classification, and vehicle registrations. Require a local share.

6-E. *CLARIFY AND PUBLICIZE THE PRIORITIES FOR TRANSPORTATION INVESTMENTS* and procedures for allocation of funds. Insure that commitments to existing (approved) projects are met before initiating major new projects that require substantial new funding commitments. Calculate and publicize the costs and benefits of major investments. Incorporate maintenance of highway stormwater systems into transportation finance planning.